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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,821	05/02/2001	Yoshiaki Sawada	14592	6338

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400 GARDEN CITY PLAZA  
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EXAMINER

TREMBLAY, MARK STEPHEN

ART UNIT PAPER NUMBER

2876

DATE MAILED: 12/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/847,821

**Applicant(s)**

SAWADA, YOSHIAKI

**Examiner**

Mark Tremblay

**Art Unit**

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

Serial Number: 09/847,821

Paper #6, Page 2

Applicant: Sawada

Filing date: 5/2/2001

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent #5,420,926 to Low et al. ("Low" hereinafter.) Low teaches a sales system using a credit card, said sales system comprising:

a credit card containing coded information P unique to said card holder;

a credit card verification devices possessed by said business (col. 4, lines 2-6), said credit verification device comprising a zero-knowledge (anonymous) verification unit based on a zero-knowledge (anonymous) verification system for verifying said credit card containing coded information based on the zero-knowledge (anonymous) verification system; and

a sales transaction in which said cardholder presents said coded information of said credit card to said business without presenting personal information of said card holder to said business and said business after verifying said credit card using said credit card verification device supplies goods or services to said card holder. As described by Low, only the pseudonym P is presented, and that is further encrypted for verification by bank Bp. Shop S gets message 233 to send via credit verification device. Shop S has no knowledge of the true customer account at Bc or the true customer's identity (personal information).

Re claim 3, the decryption necessary to decode the message 233 in various stages is possessed by both banks Bp and Bc.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, are rejected under 35 U.S.C. § 103 as being unpatentable over Low in view of U.S. Patent #4,926,479 to Goldwasser et al. ("Goldwasser" hereinafter). Low discloses the features of the invention as described above. Low does not use the precise term "zero-knowledge". Examiner maintains that Low describes a zero-knowledge system using different language. Alternatively, Examiner allows for the possibility that Low may be considered other than zero-knowledge by parties other than Examiner. Examiner therefore relies in this alternative on the teachings of Goldwasser. Goldwasser teaches a zero-knowledge system that may be used with credit cards. See abstract. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the Goldwasser zero-knowledge system to accomplish the purposes of the Low anonymous credit card system because Goldwasser describes the zero-knowledge system as useful for credit card systems, and teaches that the verifier gets no information due to strong encryption. Having the verifier get no information is a common goal of Low and Goldwasser.

#### ***Response to Arguments***

Applicant's arguments filed 9/19/02 have been fully considered but they are not persuasive. Examiner does not agree with Applicant's assertion that Low does not meet all the claim limitations. The fact that Low provides a more complex scheme is beside the point. All of the elements of Applicant's invention are found in Low. Low contains the essential invention plus further elements.

Applicant's attempt to distinguish Low's "anonymous" system from a "zero-knowledge" system is unpersuasive. Applicant has not defined a "zero-knowledge" system in an exclusive manner so as to exclude public key systems. Public key systems are interactive proof systems based on challenge and response. Applicant's description of "zero-knowledge" at page 7 appears commensurate with the anonymous system of Low. Applicant's suggestion that Low is not anonymous because "someone with access to the encryption key" could learn the account number

goes against the nature of public key systems. In public key systems, there are public keys, and secret keys. No one else has access to secret keys but the key holder. This is the whole basis for the system. This is akin to saying a bank vault isn't secure, because a robber who knows the combination or has the key could easily break in.

5 With respect to the 103 rejection, Examiner maintains that the motivation described by Examiner is present in the combined teachings as they would be understood by a skilled artisan. Further, the arguments used against the applicability of Low are unpersuasive when repeated in the context of the combined teachings.


10 ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

15 A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this  
20 final action.

***Voice***

25 Inquiries for the Examiner should be directed to Mark Tremblay at (703) 305-5176. The Examiner's regular office hours are 10:30 am to 7:00 pm EST Monday to Friday. Voice mail is available. If Applicant has trouble contacting the Examiner, the Supervisory Patent Examiner, Michael Lee, can be reached on (703) 305-3503. Technical questions and comments concerning PTO procedures may be directed to the Patent Assistance Center hotline at 1-800-786-9199 or (703) 308-4357.

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MARK TREMBLAY  
PRIMARY EXAMINER

December 16, 2002